AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently Amended) A method of suppressing speech recognition errors in a speech recognition system in which an input signal includes an echo from a system voice prompt combined with user input speech, said method comprising the steps of:

generating an acoustic model of the system voice prompt, said acoustic prompt model mathematically representing the words of the system voice prompt;

supplying the input signal to a speech recognizer having an acoustic model of a target vocabulary, said acoustic target vocabulary model mathematically representing at least one command word;

comparing the input signal to the acoustic prompt model and to the acoustic target vocabulary model;

determining which of the acoustic prompt model and the acoustic target vocabulary model provides a best match for the input signal during the comparing step;

accepting the best match if the acoustic target vocabulary model provides the best match; and

ignoring the best match if the acoustic prompt model provides the best match.

2. (Currently Amended) The method of claim 1, wherein the step of generating an acoustic model of the system voice prompt is performed in advance of the comparing step and includes the steps of:

determining phonetic units utilized in the words of the system prompt;

storing the phonetic units in a phonetic unit database accessible by the speech recognizer;

providing the speech recognizer with an orthographic text of the prompt prior to playing the prompt; and

building the prompt model by the speech recognizer, said speech recognizer selecting and concatenating appropriate phonetic units based on the orthographic text of the prompt.

3. (Currently Amended) The method of claim 2, wherein a plurality of system voice prompts are stored in a system prompt database accessible by a prompt server that plays selected prompts, and phonetic units associated with the words of the plurality of system voice prompts are stored in the phonetic unit database, and wherein the method further comprises, prior to supplying the input signal to the speech recognizer, the steps of:

instructing the prompt server to select and play a selected system prompt;

informing the speech recognizer which system prompt is going to be played; and

retrieving by the speech recognizer, phonetic units from the phonetic unit database that are appropriate for an acoustic prompt model corresponding to the selected system prompt.

4. (Original) The method of claim 1, wherein the step of generating an acoustic model of the system voice prompt includes the steps of:

sending the speech signal of the system prompt to the speech recognizer; and

generating the acoustic prompt model from the speech signal immediately before the comparing step.

5. (Original) The method of claim 1, wherein the step of generating an acoustic model of the system voice prompt includes generating the acoustic prompt model at an attenuation level of approximately 20 dB relative to the system voice prompt.

6. (Original) The method of claim 1, further comprising the steps of:

comparing the input signal to a silence model, at least one out-of-vocabulary word model, and at least one noise model;

determining whether one of the silence, out-of-vocabulary, or noise models provides the best match during the comparing step; and

ignoring the best match if one of the silence, out-of-vocabulary, or noise models provides the best match.

7. (Original) The method of claim 6, wherein the step of comparing the input signal to a silence model, at least one out-of-vocabulary word model, and at least one noise model includes comparing the input signal to a noise model that represents background babble.

8. (Original) The method of claim 6, wherein the step of comparing the input signal to a silence model, at least one out-of-vocabulary word model, and at least one noise model includes comparing the input signal to a noise model that represents background car noise.

9. (Original) The method of claim 1, wherein the step of supplying the input signal to the speech recognizer includes supplying to a simple connected word recognition grammar, the input signal in parallel with the acoustic target vocabulary model and the acoustic prompt model.

10. (Currently Amended) A method of suppressing speech recognition errors and improving word accuracy in a speech recognition system that enables a user of a communication device to interrupt a system voice prompt with command words that halt the voice prompt and initiate desired actions, said method comprising the steps of:

generating an acoustic model of the system voice prompt, said acoustic prompt model mathematically representing the words of the system voice prompt;

storing the acoustic prompt model in a speech recognizer;

storing an acoustic target vocabulary model in the speech recognizer, said acoustic target vocabulary model including models of a plurality of command words;

supplying the input signal to a comparer in the speech recognizer;

comparing the input signal to the acoustic target vocabulary model and the acoustic prompt model to identify which model provides a best match for the input signal;

ignoring the best match if the acoustic prompt model provides the best match;

accepting the best match if the acoustic target vocabulary model provides the best match;

supplying to an action table, any command word corresponding to the best match provided by the acoustic target vocabulary model;

identifying from the action table, an action corresponding to the supplied command word;

halting the system voice prompt; and

initiating the identified action.

11. (Currently Amended) A speech recognizer for recognizing input command words while suppressing speech recognition errors, wherein a signal input to the speech recognizer includes an echo from a system voice prompt combined with user input speech, said speech recognizer comprising:

an acoustic vocabulary model that mathematically represents at least one command word;

an acoustic prompt model that mathematically represents the words of the system voice prompt; and

a comparer that receives the input signal and compares the input signal to the acoustic vocabulary model and to the acoustic prompt model to determine which model provides a best match for the input signal, said comparer accepting the best match if the acoustic target vocabulary model provides the best match, and ignoring the best match if the acoustic prompt model provides the best match.

12. (Original) The speech recognizer of claim 11, further comprising means for generating the acoustic prompt model from a known text.

13. (Original) The speech recognizer of claim 11, further comprising means for generating the acoustic prompt model from the speech signal of the system voice prompt prior to playing the prompt.

14. (Original) The speech recognizer of claim 11, further comprising means for generating the acoustic prompt model at an attenuation level of approximately 20 dB relative to the system voice prompt.

15. (Original) The speech recognizer of claim 11, further comprising a silence model, at least one out-of-vocabulary word model, and at least one noise model connected to the comparer in parallel with the acoustic vocabulary model and the acoustic prompt model, wherein the comparer also determines whether the best match is provided by the silence model, the at least one out-of-vocabulary word model, or the at least one noise model, and if so, ignores the best match.

16. (Original) The speech recognizer of claim 15, wherein the at least one noise model includes a noise model that represents background babble.

17. (Original) The speech recognizer of claim 15, wherein the at least one noise model includes a noise model that represents background car noise.

18. (Original) The speech recognizer of claim 11, wherein the comparer includes a comparison function selected from a group consisting of:

an arbitrary grammar;

a simple connected word recognition grammar; and

a language model.

19. (Currently Amended) A speech recognition system for suppressing speech recognition errors and improving word accuracy, said system enabling a user of a communication device to interrupt a system voice prompt with command words that halt the voice prompt and initiate desired actions, said system comprising:

means for generating an acoustic model of the system voice prompt, said acoustic prompt model mathematically representing the words of the system voice prompt;

an acoustic vocabulary model comprising mathematical models of a plurality of command words;

a comparer that receives the input signal and compares the input signal to the acoustic vocabulary model and to the acoustic prompt model to determine which model provides a best match for the input signal, said comparer accepting the best match if the acoustic target vocabulary model provides the best match, and ignoring the best match if the acoustic prompt model provides the best match; and

an action table that receives a command word from the comparer upon a determination by the comparer that the acoustic target vocabulary model provides the best match, said action table associating the received command word with a corresponding action, and notifying an associated network to initiate the corresponding action, and to halt the system voice prompt.

20. (Original) The speech recognition system of claim 19, wherein the means for generating the acoustic prompt model includes means for generating the acoustic prompt model from a known text.

21. (Original) The speech recognition system of claim 19, wherein the means for generating the acoustic prompt model includes means for generating the acoustic prompt model from the speech signal of the system voice prompt prior to playing the prompt.

22. (Original) The speech recognition system of claim 19, wherein the means for generating the acoustic prompt model includes means for generating the acoustic prompt model at an attenuation level of approximately 20 dB relative to the system voice prompt.